

What is claimed is:

1. A delivery device for use in injecting medical substances into the skin of an animal, comprising:

a prefillable container adapted for storing a medical substance;

a needle cannula attached to said delivery device and having a forward tip extending away from said delivery device;

a limiter portion surrounding said needle cannula and extending away from said hub portion toward said forward tip of said needle cannula, said limiter portion including a generally flat skin engaging surface extending in a plane generally perpendicular to an axis of said needle cannula and being adapted to be received against skin of an animal to administer an intradermal injection of the substance, said forward tip extending beyond said skin engaging surface length of approximately .5 mm to approximately 3 mm, wherein said limiter portion limits penetration of said needle cannula into the dermis layer of the skin of the animal thereby injecting substance into the dermis layer of the animal;

a hub portion secured around said needle cannula and defining a locator for said limiter thereby positioning said limiter upon said device; and

an enclosure means for concealing said needle cannula after administering said intradermal injection.

2. A device as set forth in claim 1 wherein said enclosure means comprises said limiter, which is slidably disposed upon said hub having at least a first position and a second position, said first position exposing said forward tip of said needle cannula and said second position concealing said forward tip of said needle cannula.
3. A device as set forth in claim 2 wherein said limiter includes at least one slot oriented generally parallel to said needle cannula and having a protuberance disposed on one side thereof.
4. A device as set forth in claim 3 wherein said hub includes at least one locking finger and at least one stop, said at least one locking finger cantilevered away from said forward tip and said at least one stop being cantilevered toward said forward tip.
5. A device as set forth in claim 4 wherein said at least one locking finger includes a tab received by said slot in said limiter.
6. A device as set forth in claim 5 wherein said tab is snappable over said protuberance for moving said limiter from said first position to said second position.
7. A device as set forth in claim 6 wherein said protuberance is disposed between said tab and said at least one stop when said limiter is located in said first position.

8. A device as set forth in claim 7 wherein said limiter includes a catch engaging said at least one stop when said limiter is in said second position thereby preventing said limiter from being moved into said first position from said second position.
9. A device as set forth in claim 2 wherein said enclosure means comprises a needle plunger inserted through said limiter and being depressable for bending said needle cannula beyond its elastic limit thereby retracting said needle cannula into said limiter.
10. A device as set forth in claim 9 wherein said needle plunger is oriented generally perpendicular to said needle cannula.
11. A device as set forth in claim 2 wherein said hub portion is attachable to an outlet port of said prefillable container.
12. A device as set forth in claim 2 further including a cap positioned adjacent said skin engaging surface thereby concealing said forward tip of said needle cannula wherein said cap has an outside dimension equal to or less than said limiter.
13. A device as set forth in claim 12 wherein said cap comprises an elastomeric material.

14. A device as set forth in claim 12 wherein said forward tip of said needle cannula penetrates said cap thereby sealing said needle cannula.

15. An intradermal delivery device for injecting substances into the skin of an animal, comprising:

a prefillable container having a reservoir adapted to contain a selected substance and an outlet port that allows the substance to be expelled from said reservoir during an injection;

a needle cannula in fluid communication with said outlet port and having a forward tip adapted to penetrate the skin of an animal;

a limiter surrounding said needle and having a generally flat skin engaging surface extending in a plane generally perpendicular to an axis of said needle cannula adapted to be placed against the skin of the animal to administer an intradermal injection of the substance, said needle forward tip extending away from the said skin engaging surface from approximately .5 mm to approximately 3 mm such that said limiter limits penetration of said forward tip into the dermis layer of the skin of the animal thereby injecting the vaccine into the dermis layer of the animal; and

an enclosure means moveable to conceal said needle cannula.

16. The device as set forth in claim 15 wherein said prefillable container comprises a syringe having a generally hollow, cylindrical body portion and a plunger received within said reservoir,

said plunger being selectively movable within said reservoir thereby causing the substance to be forced out of said outlet port while administering an intradermal injection.

17. The device as set forth in claim 16 including a hub portion supporting said needle cannula and being selectively secured to said prefillable container near said outlet port.

18. A device as set forth in claim 17 wherein said enclosure means comprises said limiter, which is slidably disposed upon said hub having at least a first position and a second position, said first position exposing said forward tip of said needle cannula and said second position concealing said forward tip of said needle cannula.

19. A device as set forth in claim 18 wherein said limiter defines at least one slot oriented generally parallel to said needle cannula and having a protuberance disposed on one side thereof.

20. A device as set forth in claim 19 wherein said hub includes at least one locking finger and at least one stop, said at least one locking finger cantilevered away from said forward tip and said at least one stop being cantilevered toward said forward tip.

21. A device as set forth in claim 20 wherein said at least one locking finger includes a tab received by said slot in said limiter.

22. A device as set forth in claim 21 wherein said tab is snappable over said protuberance for moving said limiter from said first position to said second position.
23. A device as set forth in claim 22 wherein said protuberance is disposed between said tab and said at least one stop when said limiter is located in said first position.
24. A device as set forth in claim 23 wherein said limiter includes a catch engaging said at least one stop when said limiter is in said second position thereby preventing said limiter from being moved into said first position from said second position.
25. A device as set forth in claim 15 wherein said enclosure means comprises a needle plunger inserted through said limiter and being depressable for bending said needle cannula thereby retracting said needle cannula into said limiter.
26. A device as set forth in claim 25 wherein said needle plunger is oriented generally perpendicular to said needle cannula.
27. A device as set forth in claim 15 further including a removable cap positioned adjacent said skin engaging surface thereby concealing said forward tip of said needle cannula having an outside dimension equal to or less than said limiter.

28. A device as set forth in claim 27 wherein said cap comprises an elastomeric material.
29. A device as set forth in claim 28 wherein said forward tip of said needle cannula penetrates said cap thereby sealing said needle cannula and preventing the substance from leaking from said reservoir.
30. A device as set forth in claim 15 wherein said hub defines a locator for said limiter thereby positioning said limiter upon said assembly.